All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 16:01:27 ON 30 JAN 2004

=> file agricola biosis embase caplus
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.63 0.63

FULL ESTIMATED COST

Ÿ -

FILE 'AGRICOLA' ENTERED AT 16:02:59 ON 30 JAN 2004

FILE 'BIOSIS' ENTERED AT 16:02:59 ON 30 JAN 2004 COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'EMBASE' ENTERED AT 16:02:59 ON 30 JAN 2004 COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

FILE 'CAPLUS' ENTERED AT 16:02:59 ON 30 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> s lignocellulose and transform?

L1 180 LIGNOCELLULOSE AND TRANSFORM?

=> s lignocellulose and transform? and plant L2 42 LIGNOCELLULOSE AND TRANSFORM? AND PLANT

=> dplicate remove 12

DPLICATE IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> n

N IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> duplicate remove 12

DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, EMBASE, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L2

L3 40 DUPLICATE REMOVE L2 (2 DUPLICATES REMOVED)

=> d 13 1-10 ibib ab

L3 ANSWER 1 OF 40 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2003439107 EMBASE

ebk@biology.ou.dk

SOURCE: Aquatic Microbial Ecology, (September 8, 2000) Vol. 22, No.

2, pp. 199-213. print.

ISSN: 0948-3055.

DOCUMENT TYPE: Article LANGUAGE: English

ENTRY DATE: Entered STN: 20 Mar 2002

Last Updated on STN: 20 Mar 2002

Carbon and nitrogen mineralization were determined along a transect from a AB mangrove forest to a seagrass meadow in the Bangrong area, Phuket Island, Thailand. Vertical sediment profiles of carbon oxidation were measured as sulfate reduction rates (SRR) using the 35S technique and by monitoring net TCO2 and DOC production and Fe(III) reduction using anaerobic sediment incubations ('jar' technique). Nitrogen ***transformations*** measured simultaneously as net NH4+ and DON production. In addition, total benthic metabolism and net nitrogen exchange were determined as fluxes of O2, TCO2, DOC, and DIN (NO3- and NH4+) across the sediment-water ***transformations*** interface. Rates of carbon and nitrogen vascular- ***plant*** (high C:N)-dominated area were low compared with areas fuelled by detritus of marine origin (low C:N). It appears that the high content of structural biopolymers (e.g. ***lignocelluloses***) hampers microbial activity. Suboxic respiration with Fe(III) as electron acceptor accounted for 70 to 80% of the total carbon oxidation in the rooted mangrove forest sediment, whereas SRR and aerobic respiration were responsible for about 20 and <6%, respectively. The role of SRR decreased to about 10% and aerobic respiration increased to 45-65% in an adjacent bioturbated mudflat, while Fe(III) respiration decreased to 30-40%. At the sand flat and seagrass meadow outside the mangrove forest, Fe(III) respiration only accounted for 15 and apprx0%, respectively, whereas SRR was responsible for 20 to 45% of the total carbon oxidation. However, the most important electron acceptor in the area outside was oxygen (55 to 75%). The shift in dominance of electron acceptors along the transect is primarily related to the presence of roots and infauna, but the sediment composition (e.g. grain size, organic content and iron content) is believed to be an important co-factor. The net production of ammonium in the sediment was not balanced by fluxes of DIN across the sediment-water interface. The missing nitrogen was assigned to a rapid and efficient bacterial ammonium assimilation at the sediment surface as indicated by ammonium turnover times of about 1 d.

=> s lignocellulose and and transgenic and plant MISSING TERM 'AND AND'
The search profile that was entered contains a logical operator followed immediately by another operator.

=> s lignocellulose and transgenic and plant L5 1 .LIGNOCELLULOSE AND TRANSGENIC AND PLANT

=> d 15 1 ibib ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN ACCESSION NUMBER: 2002:332354 CAPLUS

DOCUMENT NUMBER: 136:351397

```
***Transgenic*** ***plants***
TITLE:
                         ligninase and cellulase for degradation of lignin and
                         cellulose to produce sugars
INVENTOR(S):
                        Sticklen, Masomeh B.; Dale, Bruce E.; Magbool, Shahina
PATENT ASSIGNEE(S):
                        Michigan State University, USA
SOURCE:
                        PCT Int. Appl., 126 pp.
```

CODEN: PIXXD2 Patent

DOCUMENT TYPE:

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

```
KIND DATE
    PATENT NO.
                                      APPLICATION NO. DATE
     -----
                    ----
                          _____
                                        -----
                  A2
    WO 2002034926
                          20020502
                                       WO 2001-US32538 20011018
                          20030925
    WO 2002034926
                    A3
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
            HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
            LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
            RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
            YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
    AU 2002011798
                         20020506 AU 2002-11798
                   A5
                                                        20011018
                    A1
    US 2002138878
                          20020926
                                       US 2001-981900
                                                        20011018
PRIORITY APPLN. INFO.:
                                     US 2000-242408P P 20001020
                                     WO 2001-US32538 W 20011018
```

AΒ This invention provides a ***transgenic*** ***plant*** expressing ligninase and cellulase genes from microbes operably linked to a DNA encoding a signal peptide which targets the fusion polypeptide produced therefrom to an organelle of the ***plant*** , in particular the chloroplasts. When the ***transgenic*** ***plants*** harvested, the ***plants*** are ground to release the ligninase and cellulase which then degrade the lignin and cellulose of the Furthermore, the sugar can be used in fermn. of ethanols.

```
=> s ligninase and cellulase and plant
            42 LIGNINASE AND CELLULASE AND PLANT
```

=> s 16 and transform? 2 L6 AND TRANSFORM?

=> d 17 1-2 ibib ab

ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:522538 CAPLUS

DOCUMENT NUMBER:

137:83028

TITLE:

Slow-release solid-chemical composition and method for

anaerobic bioremediation

INVENTOR(S):

Hince, Eric Christian

PATENT ASSIGNEE(S):

SOURCE:

U.S. Pat. Appl. Publ., 16 pp.

CODEN: USXXCO

specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 16:13:45 ON 30 JAN 2004

=> file agricola biosis embasecaplus
'EMBASECAPLUS' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE): embase caplus COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'AGRICOLA' ENTERED AT 16:14:11 ON 30 JAN 2004

FILE 'BIOSIS' ENTERED AT 16:14:11 ON 30 JAN 2004 COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'EMBASE' ENTERED AT 16:14:11 ON 30 JAN 2004 COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

FILE 'CAPLUS' ENTERED AT 16:14:11 ON 30 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> s transit(w)peptide and monocot and dicot L1 94 TRANSIT(W) PEPTIDE AND MONOCOT AND DICOT

=> duplicate remove l1

DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, EMBASE, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L1

L2 76 DUPLICATE REMOVE L1 (18 DUPLICATES REMOVED)

=> d 12 70-76 ti

- L2 ANSWER 70 OF 76 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN SORTING MECHANISM OF PROTEINS INTO PLASTIDS STRUCTURE OF PLASTIDIC PRECURSORS FOR COPPER ZINC SUPEROXIDE DISMUTASE AND GLUTAMINE SYNTHETASE AND THE SORTING SIGNAL FOR PLASTIDS.
- L2 ANSWER 71 OF 76 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2004) on STN DUPLICATE 11
- TI Differential expression of individual genes encoding the small subunit of

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE US 2001-765555 20010119 -----US 2003037355 A1 20030220 US 2000-177468P P 20000121 PRIORITY APPLN. INFO.: US 2000-620897 A2 20000721

The invention relates to the field of plant and agricultural technol. AB More specifically, the invention relates to the construction of zinc finger proteins and fusions of said proteins and their use to regulate gene expression and metabolic pathways in plants. Plant genes AP3 and MIPS were examd. for suitable zinc finger binding sites. The novel engineered zinc finger proteins used in the present methods are ZFPm1, ZFPm2, ZFPm3, ZFPm4 and ZFPAp3. These proteins can be used alone or fused to an effector domain. The present methods can be used to modulate gene expression in ***monocot*** or ***dicot*** plant cells.

=> s chloroplast and targeting and vacuole 36 CHLOROPLAST AND TARGETING AND VACUOLE

=> duplicate remove 14 DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, EMBASE, CAPLUS' KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n PROCESSING COMPLETED FOR L4 L5 28 DUPLICATE REMOVE L4 (8 DUPLICATES REMOVED)

=> d 15 1-10 ibib ab

ANSWER 1 OF 28 CAPLUS COPYRIGHT 2004 ACS on STN L5

ACCESSION NUMBER:

2003:133486 CAPLUS

DOCUMENT NUMBER:

138:183112

TITLE:

An in vivo assay for proteases by activation of transport of reporter proteins and its use for screening for therapeutic proteinase inhibitors.

INVENTOR(S): PATENT ASSIGNEE(S): Hwang, Inhwan; Kim, Dae Heon; Lee, Yong Jik Ahram Biosystems Inc., S. Korea

SOURCE:

PCT Int. Appl., 213 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.		KIND		DATE		APPLICATION NO.						DATE			
WO 2003014381		A1		20030220			WO 2002-KR1515 20020808								
W: AE,	AG,	AL,	AM,	ΑT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,	CN,
CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,
GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KP,	KR,	ΚZ,	LC,	LK,	LR,
LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	ΜZ,	NO,	NZ,	OM,	PH,
PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	TJ,	TM,	TN,	TR,	TT,	TZ,
UA,	UG,	US,	UZ,	VN,	YU,	ZA,	ZM,	ZW,	AM,	ΑZ,	BY,	KG,	ΚZ,	MD,	RU,
TJ,	TM														
RW: GH,	GM,	KE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑT,	BE,	BG,
CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,
PT,	SE,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,

=> FIL STNGUIDE

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL

ENTRY SESSION
CA SUBSCRIBER PRICE -6.24 -6.24

FILE 'STNGUIDE' ENTERED AT 16:24:58 ON 30 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jan 23, 2004 (20040123/UP).

=> file agricola biosis embase caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 0.48 59.17 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION CA SUBSCRIBER PRICE 0.00 -6.24

FILE 'AGRICOLA' ENTERED AT 16:30:00 ON 30 JAN 2004

FILE 'BIOSIS' ENTERED AT 16:30:00 ON 30 JAN 2004 COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'EMBASE' ENTERED AT 16:30:00 ON 30 JAN 2004 COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

FILE 'CAPLUS' ENTERED AT 16:30:00 ON 30 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> s ligninase and cellulase and plant L6 42 LIGNINASE AND CELLULASE AND PLANT

=> duplicate remove 16

DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, CAPLUS'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L6

L7

41 DUPLICATE REMOVE L6 (1 DUPLICATE REMOVED)

=> d 17 1-10 ibib ab

L7 ANSWER 1 OF 41 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 2003:439053 BIOSIS DOCUMENT NUMBER: PREV200300439053

TITLE: Optimization of extraction of bulk enzymes from spent

mushroom compost.

AUTHOR(S): Singh, Avneesh D.; Abdullah, Noorlidah; Vikineswary, S.

TITLE: ***Transgenic*** ***plants*** expressing

ligninase and cellulase for degradation of lignin and

cellulose to produce sugars

INVENTOR(S):

Sticklen, Masomeh B.; Dale, Bruce E.; Maqbool, Shahina

Michigan State University, USA

SOURCE:

PCT Int. Appl., 126 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT ASSIGNEE(S):

```
KIND DATE
     PATENT NO.
                                         APPLICATION NO. DATE
     -----
                     ----
                           -----
                                          -----
    WO 2002034926 A2
                                         WO 2001-US32538 20011018
                           20020502
    WO 2002034926
                     A3 20030925
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
            HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
            LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
            RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
            YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
    AU 2002011798 A5 20020506 AU 2002-11798 20011018 US 2002138878 A1 20020926 US 2001-981900 20011018
                                       US 2000-242408P P 20001020
PRIORITY APPLN. INFO.:
                                       WO 2001-US32538 W 20011018
```

AB This invention provides a ***transgenic*** ***plant*** expressing ligninase and cellulase genes from microbes operably linked to a DNA encoding a signal peptide which targets the fusion polypeptide produced therefrom to an organelle of the ***plant***, in particular the chloroplasts. When the ***transgenic*** ***plants*** are harvested, the ***plants*** are ground to release the ligninase and cellulase which then degrade the lignin and cellulose of the ***transgenic*** ***plants*** to produce the fermentable sugars. Furthermore, the sugar can be used in fermn. of ethanols.

=> s 16 and transform?

L7 2 L6 AND TRANSFORM?

=> d 17 1-2 ibib ab

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:522538 CAPLUS

DOCUMENT NUMBER: 137:83028

TITLE: Slow-release solid-chemical composition and method for

anaerobic bioremediation

INVENTOR(S): Hince, Eric Christian

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 16 pp.

CODEN: USXXCO